



# Compartment Review Presentation

## Escanaba Forest Management Unit

Compartment 82

Entry Year 2016

Acreage: 886

County Delta

Management Area: Green Bay Lake Plain

**Revision Date:** 05/05/2014

**Stand Examiner:** Dan Racine

**Legal Description:**

T 38N R 24W Sections 22 and 23.

**Identified Planning Goals:**

This compartment is a mix of upland and lowland with lowland spruce/fir and tamarack to the west of the Makosky road and mixed upland deciduous, aspen, and hemlock and pine to the east of the Makosky road. This compartment has good cedar and hemlock regeneration in the areas of previous timber sale harvests. The majority of the treatments to the west of the Makosky Road are in the tamarack and lowland spruce types designed to regenerate tamarack and spruce in the areas where the Eastern Larch Beetle were found. The majority of the treatments along the Makosky road and to the east are designed to enhance the existing hemlock regeneration and mixed upland deciduous and aspen types.

**Soil and topography:**

Mostly level lowlands in the west half of the compartment with upland ridges in the east half of the compartment. Major soil series are Au Gres, Charlevoix, Crowell, Ensley, Kalkaska, Otisco, Roscommon, Rubicon, and Tawas.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:**

Ownership to the north and southwest of this compartment is state, to the east is mostly industrial forest owned by Plum Creek. Ownership to the west is private small tracts of land. Land use to the west is residential with a few farms. Land use to the north, south, and east is forest.

**Unique Natural Features:**

No Unique Natural Features known.

**Archeological, Historical, and Cultural Features:**

No Archeological, Historical, or Cultural Features known.

**Special Management Designations or Considerations:**

None.

**Watershed and Fisheries Considerations:**

None.

**Wildlife Habitat Considerations:**

The west half of this compartment is predominantly black spruce with some mixed swamp conifer, while the eastern portion is a mix of aspen, cedar, hemlock, and some mixed hardwoods. Several small herbaceous openings are found throughout the southern half of the compartment. The herbaceous openings will be maintained to benefit game and non-game wildlife species. A large portion of spruce and mixed swamp conifer will be cut and regenerated on the west side of the stand. A majority of the aspen habitat will be clearcut which will produce abundant cover and browse for early successional wildlife species. Some small hardwood and mixed conifer stands will be cut and the retention areas will contain the best pockets of cedar and hemlock. The east side of the compartment contains a hemlock stand which is currently demonstrating good recruitment of hemlock > 5 feet tall. Experimental "strip cuts" may be implemented in this stand to evaluate methods of potential hemlock recruitment.

**Mineral Resource and Development Concerns and/or Restrictions**

Surface sediments consist of lacustrine (lake) sand and gravel, peat and muck and minor medium-textured glacial till. The glacial drift thickness varies between 10 and 50 feet. The Ordovician Trenton Group underlies the glacial drift. The Trenton is quarried for stone and overlap Precambrian aged rocks which may have metallic and nonmetallic mineral potential. This area has not been leased previously for metallic exploration. The nearest gravel pits are located to the east and there maybe potential on the uplands. No economic oil and gas production has been found in the UP.

**Vehicle Access:**

Vehicle access to this compartment is very good. Access to the east half of this compartment is also very good. The west half of the compartment access is difficult due to low and wet swamps.

**Survey Needs:**

Potential survey requests to the west side of the compartment.

**Recreational Facilities and Opportunities:**

There are no recreational facilities within this compartment. However, this area is heavily hunted in the fall of the year. Many camps are set up along the Makosky Rd each year.

**Fire Protection:**

This area is not prone to fire due to the timber types. Should a fire occur access to most areas is very good. Water may be somewhat difficult to find nearby.

**Additional Compartment Information:**

See attached information.

**The following reports from the Inventory are attached:**

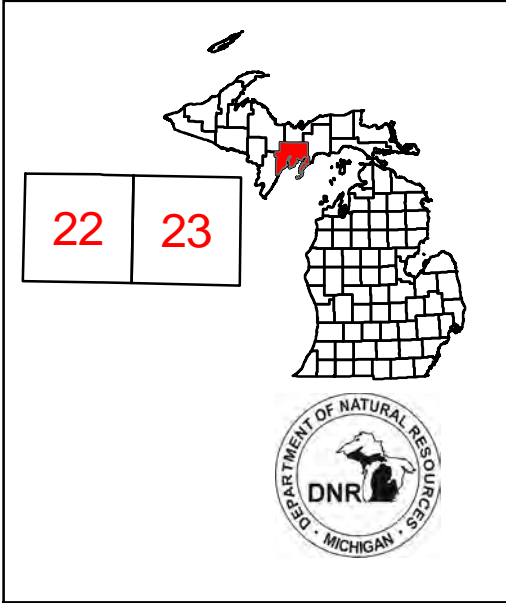
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

**The following information is displayed, where pertinent, on the attached compartment maps:**

- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

# Cover Type & Treatment Map

Compartment: 82  
 T38N R24W Sec. 22, 23  
 County: Delta  
 Unit: Escanaba  
 YOE: 2016  
 Acres: 886 GIS Calculated  
 Examiner: Dan Racine  
 Map Revised: 05/20/2014  
 Map Phase: Pre-Review



**Stand #**  
 23  
**Stocking Density**  
 (4120) - A7  
 Level 3 OI  
 Level 4 Code  
**Cover Type Code**

### Legend

- Miris Corners
- Remonumented Section Corners
- Stream
- Intermittent Stream
- Lakes and Rivers

### Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Seed Tree (w/Reserves)
- Shelter Wood (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)
- Other Treatment - See Comments

### Forest Stands

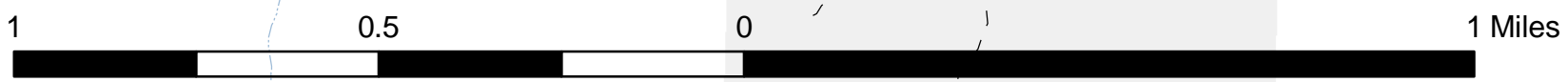
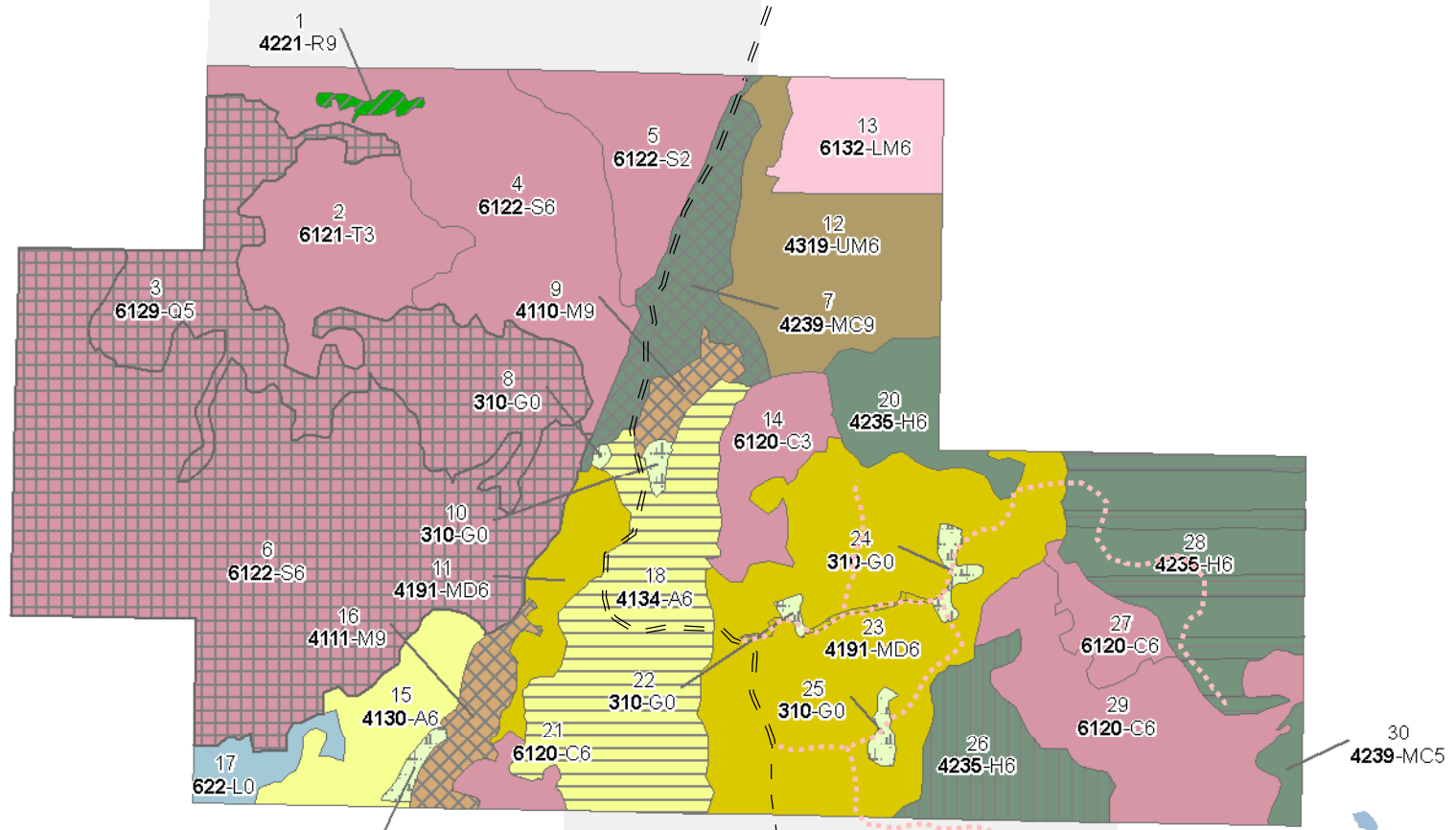
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 431 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

### Non-Forest Stands

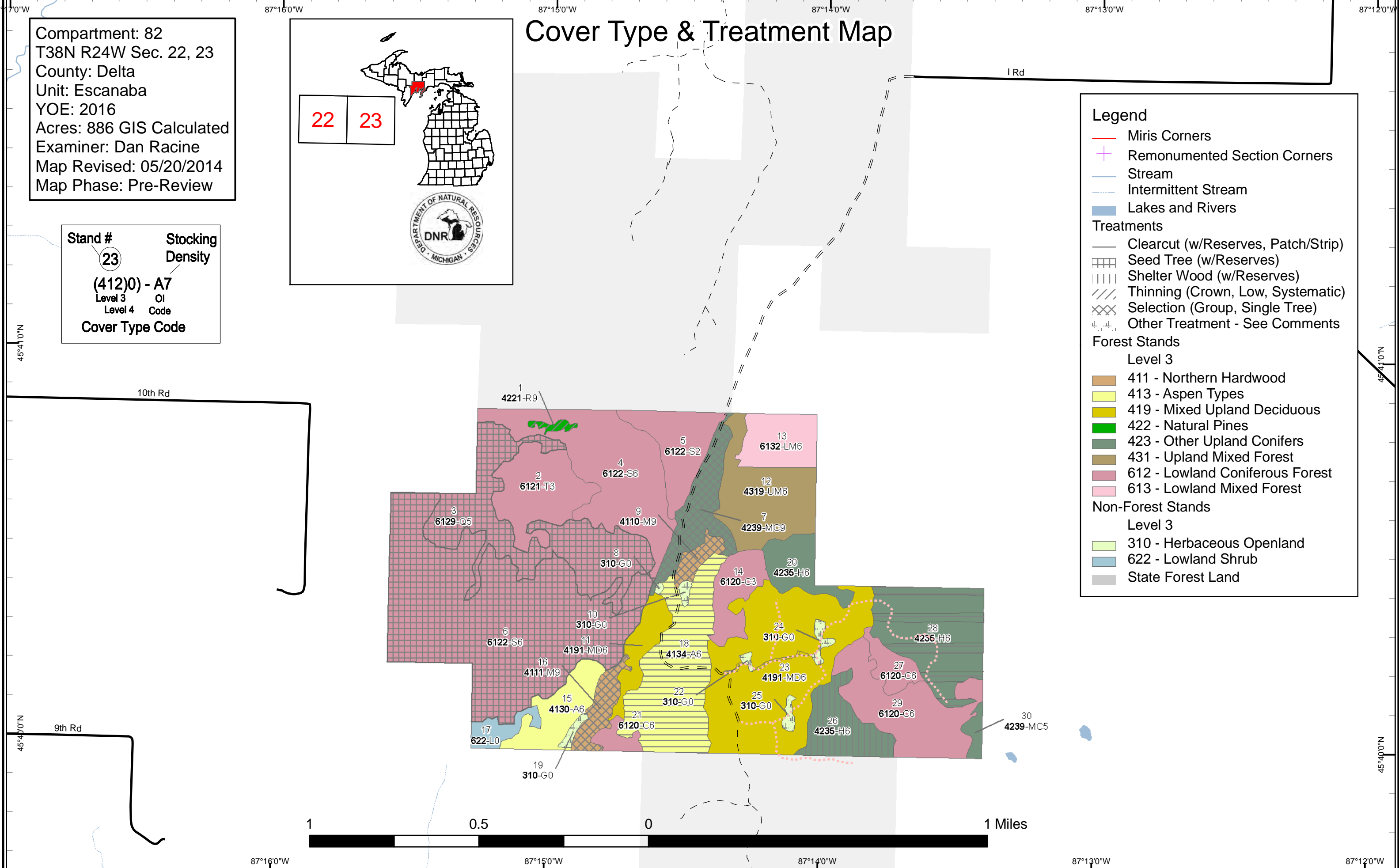
Level 3

- 310 - Herbaceous Openland
- 622 - Lowland Shrub
- State Forest Land



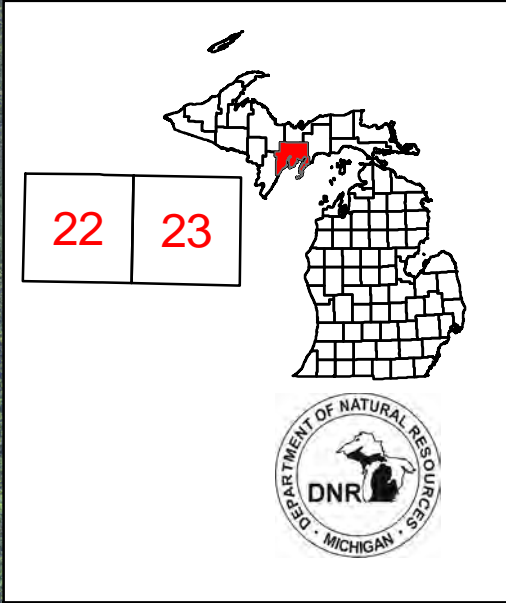
45°41'0"N  
45°40'0"N

45°41'0"N  
45°40'0"N



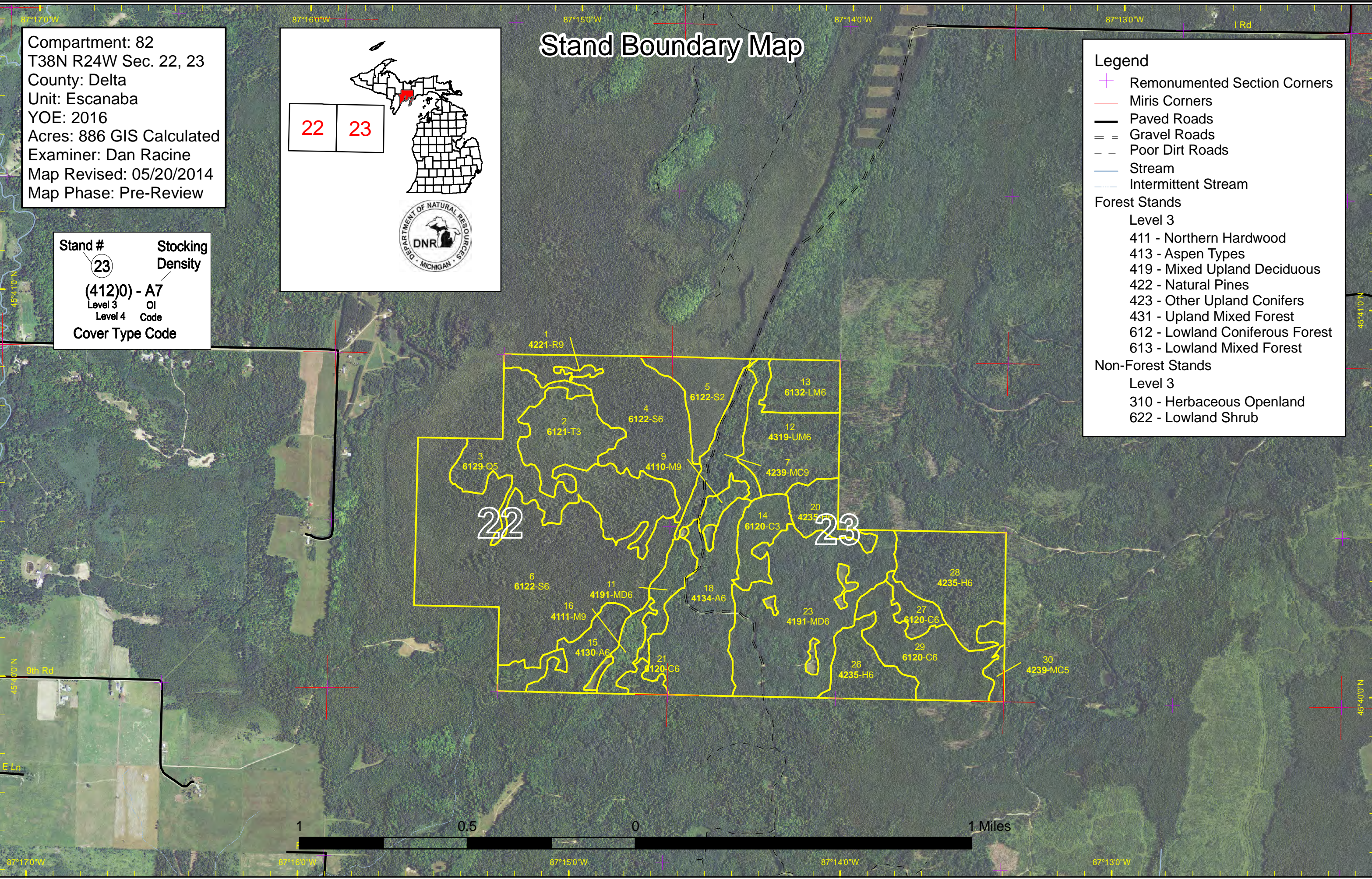
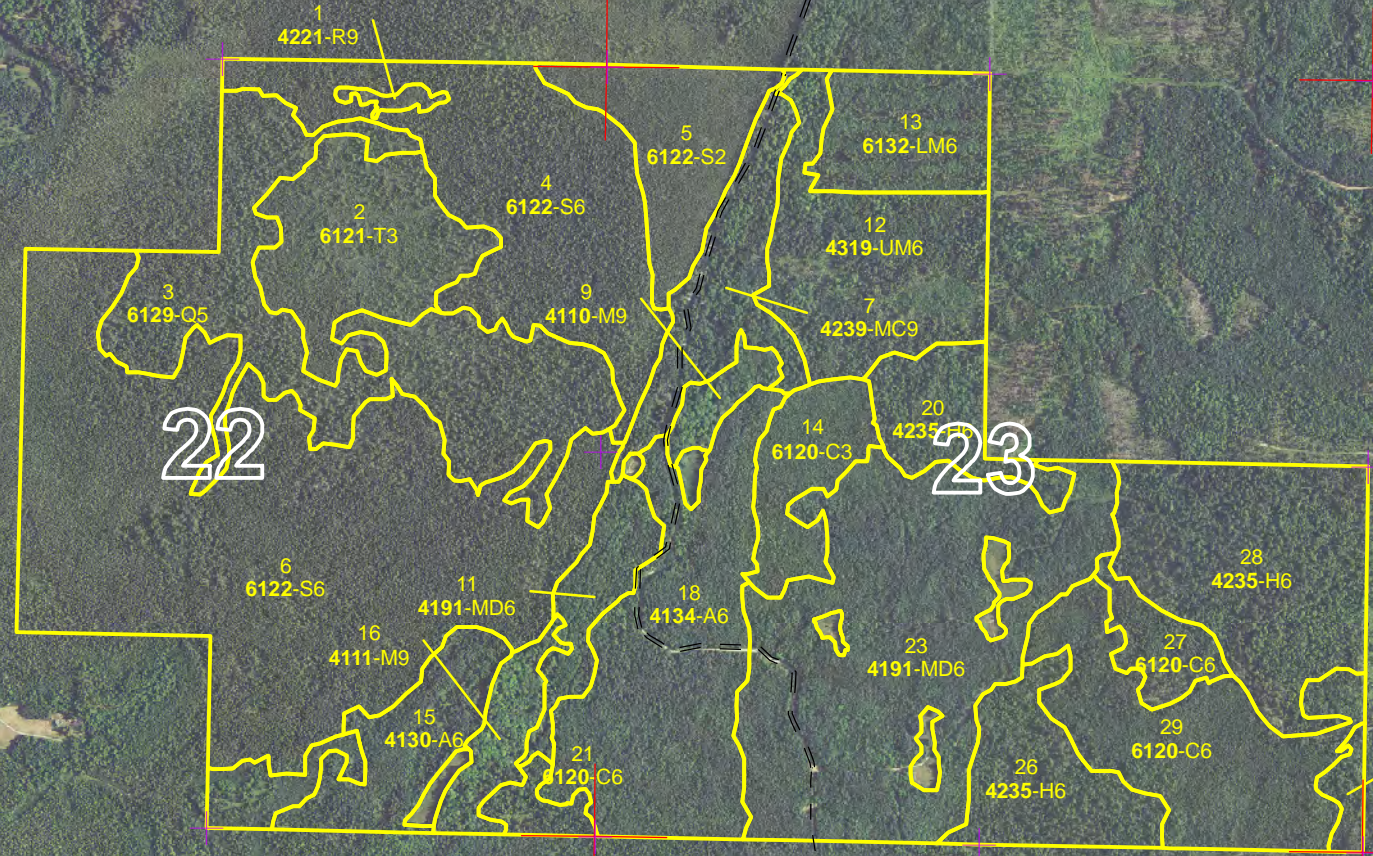
# Stand Boundary Map

Compartment: 82  
 T38N R24W Sec. 22, 23  
 County: Delta  
 Unit: Escanaba  
 YOY: 2016  
 Acres: 886 GIS Calculated  
 Examiner: Dan Racine  
 Map Revised: 05/20/2014  
 Map Phase: Pre-Review



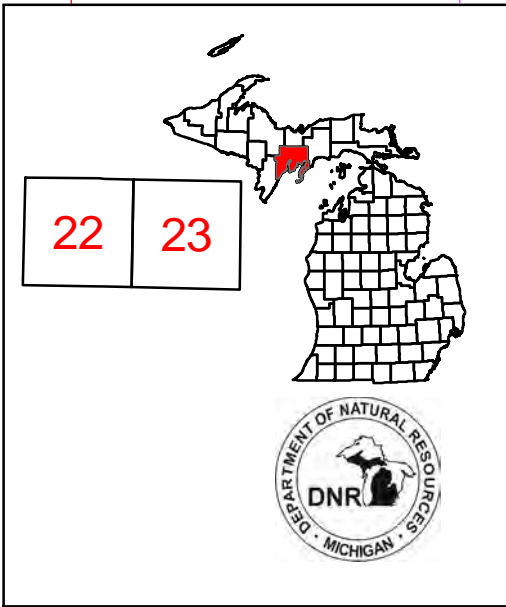
**Stand #**  
 23  
**Stocking Density**  
 (4120) - A7  
 Level 3 OI  
 Level 4 Code  
**Cover Type Code**

- Legend**
- + Remonumented Section Corners
  - Miris Corners
  - Paved Roads
  - = =** Gravel Roads
  - -** Poor Dirt Roads
  - Stream
  - - Intermittent Stream
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 422 - Natural Pines
  - 423 - Other Upland Conifers
  - 431 - Upland Mixed Forest
  - 612 - Lowland Coniferous Forest
  - 613 - Lowland Mixed Forest
- Non-Forest Stands**
- Level 3
- 310 - Herbaceous Openland
  - 622 - Lowland Shrub



# Special Conservation Areas & Site Conditions Map

Compartment: 82  
T38N R24W Sec. 22, 23  
County: Delta  
Unit: Escanaba  
YOE: 2016  
Acres: 886 GIS Calculated  
Examiner: Dan Racine  
Map Revised: 05/20/2014  
Map Phase: Pre-Review



**Stand #**      **Stocking Density**  
23  
**(4120) - A7**  
Level 3      OI  
Level 4      Code  
**Cover Type Code**

**Legend**

- Remonumented Section Corners
- Miris Corners
- Stand Boundaries
- Available w/ Constraints (Factor - Number)

**Site Condition Type**

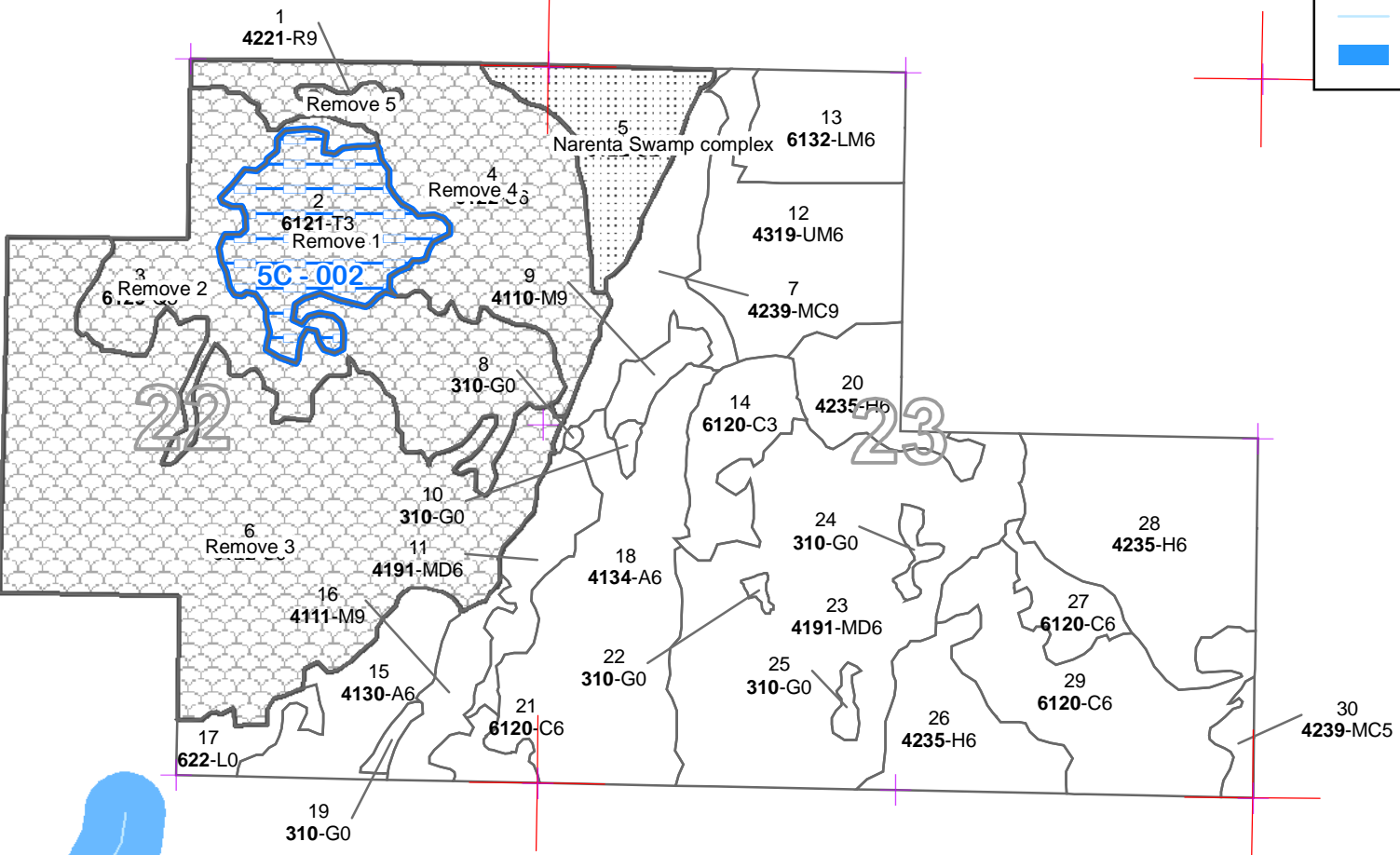
- Available Factors W/ Constraints
- 5C: Delay treatment for age/size class diversity or exceptional site quality

**Proposed SCA's**

- Proposed SCA
- SCA Removal

**Special Conservation Areas**

- Cold Water Streams
- High Priority Trout Stream Buffer



87°16'0"W      87°15'0"W      87°14'0"W      87°13'0"W      87°12'0"W

45°41'0"N

45°41'0"N

45°40'0"N

45°40'0"N

Report 1 – Total Acres by Cover Type and Age Class



	Age Class														Total
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	
Aspen	0	0	0	22	63	0	0	0	0	0	0	0	0	0	85
Cedar	0	0	0	18	0	0	0	0	0	0	15	47	0	0	80
Hemlock	0	0	0	0	0	0	0	0	0	0	95	0	0	0	95
Herbaceous Openland	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Lowland Conifers	0	0	0	0	0	0	0	0	0	73	0	0	0	0	73
Lowland Mixed Forest	0	0	0	22	0	0	0	0	0	0	0	0	0	0	22
Lowland Shrub	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Lowland Spruce/Fir	0	0	0	0	0	0	0	95	175	0	0	0	0	0	270
Mixed Upland Deciduous	0	0	0	115	0	0	0	0	0	0	0	0	0	0	115
Northern Hardwood	0	0	0	0	0	0	0	17	0	0	0	0	0	0	17
Red Pine	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Tamarack	0	0	0	0	0	0	0	37	0	0	0	0	0	0	37
Upland Conifers	0	0	0	0	0	0	0	0	0	0	29	0	0	0	29
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	43	0	0	0	43
<b>Total</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>177</b>	<b>63</b>	<b>0</b>	<b>0</b>	<b>149</b>	<b>175</b>	<b>73</b>	<b>183</b>	<b>49</b>	<b>0</b>	<b>0</b>	<b>886</b>



## Report 2 – Proposed Treatment Summaries

**Escanaba Mgt. Unit**  
**Year of Entry 2016**

**Compartment 082**  
**Total Compartment Acres: 886**

### Acres by Treatment Type

Commercial Harvest - 400    Tree Planting - 0    Other - 0  
 Habitat Cut - 0    Opening Maintenance - 9

### Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
<b>Aspen Types</b>	63	0	0	0	0	0	63
<b>Lowland Coniferous Forest</b>	0	0	248	0	0	0	248
<b>Natural Pines</b>	0	0	0	0	2	0	2
<b>Northern Hardwood</b>	0	17	0	0	0	0	17
<b>Other Upland Conifers</b>	19	26	0	25	0	0	70
<b>Total</b>	<b>82</b>	<b>43</b>	<b>248</b>	<b>25</b>	<b>2</b>	<b>0</b>	<b>400</b>



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	33082001-Cut	1.9	42210 - Natural Red Pine	High Density Log	115		Harvest	Crown Thinning	4221 - Natural Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Thinning- Retain approximately 90 BA throughout.										
<u>Specs:</u>										
<u>Other</u> This stand will be cut with stand 3 and look to treat again with stand 4 of compartment 82 when that stand is ready.										
<u>Comments:</u>										
<u>Next</u> No regeneration survey needed.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
3	33082003-Cut	73.0	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	90		Harvest	Seed Tree with Reserves	612 - Lowland Coniferous Forest	Cmpt. Review Proposal
<u>Prescription</u> Seed tree with reserves- Leave some scattered white pine seed trees throughout and a few clumps of a mix of species of approximately 8-10 trees										
<u>Specs:</u> per clump.										
<u>Other</u> The tamarack has ELB in the mature tamarack.										
<u>Comments:</u>										
<u>Next</u> Monitor the regeneration at appropriate intervals.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
6	33082006-Cut	175.0	6122 - Black Spruce	High Density Pole	82		Harvest	Seed Tree with Reserves	612 - Lowland Coniferous Forest	Cmpt. Review Proposal
<u>Prescription</u> Seed tree with reserves- Leave a retention area along the drainage on the south part of the stand. Leave retention of the areas with smaller										
<u>Specs:</u> submerchantable black spruce. Leave clumps of approximately 8-10 trees per clump of a mix of species throughout the stand.										
<u>Other</u> The stand acreage will be reduced with the retention areas. The amount of retention will be determined at time of sale prep.										
<u>Comments:</u>										
<u>Next</u> Monitor the regeneration at appropriate intervals.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
7	33082007-Cut	25.5	42390 - Mixed Non- Pine Upland Conifers	High Density Log	107		Harvest	Group Selection	429 - Mixed Upland Conifers	Cmpt. Review Proposal
<u>Prescription</u> Group selection- Cut all the trees except the hemlock, cedar, and pine. Create gaps by harvesting the hemlock and pine in the areas that trees										
<u>Specs:</u> are harvested. Leave retention of the heaviest cedar areas.										
<u>Other</u> The hemlock is 30%, the pine is 5% and the cedar is 40% of the canopy cover type.										
<u>Comments:</u>										
<u>Next</u> Create an FTP for scarifying the stand post harvest. Monitor the regeneration at appropriate intervals.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										





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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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9	33082009-Cut	6.2	4110 - Sugar Maple Association	High Density Log	78	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Cmpt. Review Proposal
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Prescription Selection harvest- Retain approximately 70BA throughout the stand and create canopy gaps large enough for regeneration. Leave the hemlock unless necessary for the harvest.

Other The hemlock is 10% of the canopy cover type.  
Comments:

Next Monitor the regeneration at appropriate intervals.  
Steps:

Proposed  
Start Date: 10/01/2015

16	33082016-Cut	11.3	4111 - S.Maple, Hard Mast Association	High Density Log	78	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Cmpt. Review Proposal
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Prescription Selection harvest- Retain approximately 70-80 BA throughout and create canopy gaps large enough to create regeneration.

Other  
Comments:

Next --Dan Racine : 07/03/2014 comments: Wildlife division will create an FTP for planting oak in the canopy gaps.  
Steps: Monitor the regeneration at appropriate intervals.

Proposed  
Start Date: 10/01/2015

18	33082018-Cut	62.7	4134 - Aspen, Spruce/Fir	High Density Pole	45		Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
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Prescription Clearcut with reserves- Cut all trees except leave retention along the boundary line.

Other  
Comments:

Next Monitor the regeneration at appropriate intervals.  
Steps:

Proposed  
Start Date: 10/01/2015

26	33082026-Cut	24.7	42350 - Upland Hemlock	High Density Pole	107		Harvest	Shelterwood	429 - Mixed Upland Conifers	Cmpt. Review Proposal
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Prescription Shelterwood harvest- Cut all species except the hemlock, cedar, and pine. Mark the hemlock, cedar, and pine creating canopy gaps to expand and enhance the regeneration of hemlock, pine, and spruce/fir.

Other This stand was cut previously cut in 1998. The hemlock is 50% and the cedar is 5% of the canopy cover type. Favor to harvest in the summer months.  
Comments:

Next Monitor the regeneration at appropriate intervals.  
Steps:

Proposed  
Start Date: 10/01/2015



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
28 33082028-Cut	19.4	42350 - Upland Hemlock	High Density Pole	107		Harvest	Patch or Strip Clearcut	429 - Mixed Upland Conifers	Cmpt. Review Proposal

Prescription --Dan Racine : 07/03/2014 comments: Per pre-review decision- This stand will be an experimental hemlock treatment. The stand will be strip cut with the strips approximately 1/2 the height of the canopy. All trees will be removed within the strips. The strip acreage will cover 1/3 of the total stand acreage. The strips should run east-west.

Other Comments: The hemlock is 65% and the cedar is 10% of the canopy cover type. The stand should be harvested in the summer months to encourage scarification. The areas of higher cedar canopy will be retained and not cut.

Next Steps: --Dan Racine : 07/03/2014 comments: Per pre-review comments this stand will be scarified post harvest. Also, an FTP should be created for phragmites control.

Proposed Start Date: 10/01/2015

8 NF_33082008-NonFor	0.4	3102 - Grass				Non-Forest Management	Other - Specify	310 - Herbaceous Openland	Cmpt. Review Proposal
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Prescription Opening enhancement. Cut brush and encroaching tree species, mow, herbicide, lime, fertilize, plant both annual and perennial herbaceous plants as well as hard/soft mast producers within the opening boundaries for the benefit of both game and non-game species.

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

10 NF_33082010-NonFor	1.3	3102 - Grass				Non-Forest Management	Other - Specify	310 - Herbaceous Openland	Cmpt. Review Proposal
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Prescription Opening enhancement. Cut brush and encroaching tree species, mow, herbicide, lime, fertilize, plant both annual and perennial herbaceous plants as well as hard/soft mast producers within the opening boundaries for the benefit of both game and non-game species.

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

19 NF_33082019-NonFor	1.8	3102 - Grass				Non-Forest Management	Other - Specify	310 - Herbaceous Openland	Cmpt. Review Proposal
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Prescription Opening Enhancement. Cut brush and encroaching tree species, mow, herbicide, lime, fertilize, plant both annual and perennial herbaceous plants as well as hard/soft mast producers within the opening boundaries for the benefit of both game and non-game species.

Other Comments:

Next Steps:

Proposed Start Date: Unspecified



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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22 NF_33082022-NonFor	1.7	3102 - Grass				Non-Forest Management	Other - Specify	310 - Herbaceous Openland	Cmpt. Review Proposal
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Prescription Opening enhancement. Cut brush and encroaching tree species, mow, herbicide, lime, fertilize, plant both annual and perennial herbaceous plants as well as hard/soft mast producers within the opening boundaries for the benefit of both game and non-game species.

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

24 NF_33082024-NonFor	2.2	3102 - Grass				Non-Forest Management	Other - Specify	310 - Herbaceous Openland	Cmpt. Review Proposal
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Prescription Opening enhancement. Cut brush and encroaching tree species, mow, herbicide, lime, fertilize, plant both annual and perennial herbaceous plants as well as hard/soft mast producers within the opening boundaries for the benefit of both game and non-game species.

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

25 NF_33082025-NonFor	1.7	3102 - Grass				Non-Forest Management	Other - Specify	310 - Herbaceous Openland	Cmpt. Review Proposal
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Prescription Opening enhancement. Cut brush and encroaching tree species, mow, herbicide, lime, fertilize, plant both annual and perennial herbaceous plants as well as hard/soft mast producers within the opening boundaries for the benefit of both game and non-game species.

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

**Total Treatment Acreage Proposed: 408.7**



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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#Type! #Type!

Prescription  
Specs:

Other  
Comment:

Next  
Steps:

Proposed  
Start Date: #Type!

Limiting Factor

**Total Treatment**  
**Acreage Proposed: 0.0**

## Report 5 – Site Conditions

Escanaba Mgt. Unit  
Dan Racine : Examiner

Compartment 082  
Year of Entry 2016

### Availability for Management

Total Acres			Dominant Site Conditions	
Acres	Available	Not Available	No	5C
85	85		<b>Aspen</b>	85
80	80		<b>Cedar</b>	80
95	95		<b>Hemlock</b>	95
73	73		<b>Lowland Conifers</b>	73
22	22		<b>Lowland Mixed Forest</b>	22
270	270		<b>Lowland Spruce/Fir</b>	270
115	115		<b>Mixed Upland Deciduous</b>	115
17	17		<b>Northern Hardwood</b>	17
2	2		<b>Red Pine</b>	2
37	37		<b>Tamarack</b>	37
29	29		<b>Upland Conifers</b>	29
43	43		<b>Upland Mixed Forest</b>	43
869	869		Total Forested Acres	833
	100%		Relative Percent	37

*\*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
002	Available	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	37	No Limiting Factor			
<b>Comments:</b>							



**Report 6 – PROPOSED SPECIAL CONSERVATION AREA\* (SCA) DETAILS**

\* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
<b>Narenta Swamp complex</b>	Habitat Areas or Corridors	Habitat Corridor	<b>SCA</b>	26.7
<b>Comments</b> Stand is 1 stick and smaller spruce. Poor quality 3-5" scattered occasional spruce. Sap/pole stand.				
<b>Remove 5</b>	Potential Old Growth		<b>SCA Removal</b>	1.9
<b>Comments</b> Ride of Red Pine. Harvest while cutting stand 3 pre-inventory				
<b>Remove 1</b>	Potential Old Growth		<b>SCA Removal</b>	36.8
<b>Comments</b> Small tamarack about 1 stick. Pockets of 2-3 stick. This stand has ELB with dead tops in the larger tamarack. The younger timber is about 20-25 years old estimate.				
<b>Remove 4</b>	Potential Old Growth		<b>SCA Removal</b>	68.2
<b>Comments</b> Nice stand of black spruce with white pine and occasional tamarack. Size of timber is larger as you go east from pine ridge.				
<b>Remove 2</b>	Potential Old Growth		<b>SCA Removal</b>	73.0
<b>Comments</b> White pine, tamarack, and spruce. Heavy to tamarack in places. ELB in some of the tamarack. Scattered timber. Blueberry and leatherleaf for ground cover.				
<b>Remove 3</b>	Potential Old Growth		<b>SCA Removal</b>	175.0
<b>Comments</b> Black spruce 7-8" dbh. Small area of T,C, spruce. Drainage is south part of stand. As you go north smaller diameter 5" 2-3stick with pockets with heavier spruce than Tamarack and heavier tamarack than spruce.				



**Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS**

\* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

ERA = Ecological Reference Area  
 HCVA = High Conservation Value Area  
 SCA = Special Conservation Area

Conservation Area	Type	Description
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42210 - Natural Red Pine	High Density Log	1.9	115		Ride of Red Pine. Harvest while cutting stand 3 pre-inventory
2	6121 - Tamarack	High Density Sapling	36.8	72		Small tamarack about 1 stick. Pockets of 2-3 stick. This stand has ELB with dead tops in the larger tamarack. The younger timber is about 20-25 years old estimate.
3	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	73.0	90		White pine, tamarack, and spruce. Heavy to tamarack in places. ELB in some of the tamarack. Scattered timber. Blueberry and leatherleaf for ground cover.
4	6122 - Black Spruce	High Density Pole	68.2	72		Nice stand of black spruce with white pine and occasional tamarack. Size of timber is larger as you go east from pine ridge.
5	6122 - Black Spruce	Medium Density	26.7	72		Stand is 1 stick and smaller spruce. Poor quality 3-5" scattered occasional spruce. Sap/pole stand.
6	6122 - Black Spruce	High Density Pole	175.0	82		Black spruce 7-8" dbh. Small area of T,C, spruce. Drainage is south part of stand. As you go north smaller diameter 5" 2-3stick with pockets with heavier spruce than Tamarack and heavier tamarack than spruce.
7	42390 - Mixed Non-Pine Upland Conifers	High Density Log	25.5	107		Mixed upland/lowland site with the harvest in the upland areas. This stand was harvested in the summer of 1990. Oak was planted in 1995 with no survivors found. Trace amounts of balsam fir, yellow birch, red pine, quaking aspen, white spruce, and balm in the overstory.
9	4110 - Sugar Maple Association	High Density Log	6.2	78	111-140	Nice hardwood stand. Pockets of hemlock with scattered individual hemlock.
11	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	14.2	37		Look at in 10 years for harvest.
12	4319 - Mixed Upland Forest	High Density Pole	43.3	104		This stand is a mix of what was cut and what was left with a removal cut and completed in 2000. What is left is 80 and what is cut is regenerating. Clearcut in 10 years.
13	6132 - Mixed Lowland Forest with Cedar	High Density Pole	21.8	39		Super canopy Log cedar left. This stand was strip cut in 1975 and again in 1997. In ten years clearcut all merchantable and manage stand as one stand.
14	6120 - Lowland Cedar	High Density Sapling	18.0	37		Cedar was bored and at 27 years old. Strips were cut in the 1960's and the residual cut in 1977.
15	4130 - Aspen	High Density Pole	22.2	38		Treat next treatment period.
16	4111 - S.Maple, Hard Mast Association	High Density Log	11.3	78	111-140	Occasional hemlock and groups and 3-4 in areas. Leatherwood in the understory.





	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	4134 - Aspen, Spruce/Fir	High Density Pole	62.7	45		Aspen stand with the size of the timber being variable from 5-8 inches. Harvest for age class distribution.
20	42350 - Upland Hemlock	High Density Pole	16.8	101		See how other treatments respond to group selection and look at this one next treatment period. Trace amounts of paper birch.
21	6120 - Lowland Cedar	High Density Pole	5.4	107		Stand was treated under Grouse Feathers sale in 1998 with the cedar being left. In the areas that were treated it is full subcanopy of balsam fir, white spruce, and some white pine 3-5' tall.
23	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	101.1	36		Large portion of this stand was clearcut in 1977 under the Makosky Road sale. All trees cut in this stand. Trace of cedar and hemlock.
26	42350 - Upland Hemlock	High Density Pole	24.7	107		Stand was cut under the yellow trails sale in 1998-1999. Where the stand was opened up full of red maple, paper birch, hemlock, cedar, white pine, white spruce regeneration. Most of the aspen is dead. Areas that are open contain 30-60BA of hemlock, cedar, red maple, paper birch.
27	6120 - Lowland Cedar	High Density Pole	9.8	105		This stand was cut under the Hyde South sale. Gaps were created with little cedar regeneration in the gaps currently but some along the edges. Significant blowdown some cut up from previous sale. This stand was cut in 2009. Some deer browsing but minimal. Regeneration outside of the gaps currently.
28	42350 - Upland Hemlock	High Density Pole	53.7	107		Phragmites in the lowland pockets in the cedar areas. In the gaps the hemlock regeneration is m-h density. This stand was cut under the yellow trails sale. All aspen, spruce/fir, hardwoods except those marked with blue paint cut and orange marked hemlock and pine completed in 1999. Trace amounts of yellow birch and red maple. Trace amounts of cedar in the understory.
29	6120 - Lowland Cedar	High Density Pole	47.3	114		Cedar stand with a mix of ash, paper birch, white spruce and balsam fir. Couple of Tamarack areas.
30	42390 - Mixed Non- Pine Upland Conifers	Medium Density Pole	4.0	107		This stand was cut under the yellow trails sale completed in 1999. All aspen, paper birch, spruce/fir, and hardwood cut except those marked with blue paint. Orange marked hemlock and pine cut. Not much to cut here. Filling in with white pine, balsam fir and hemlock.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
8	3102 - Grass	0.4	Yes	Medium	East of Makosky road.
10	3102 - Grass	1.3	Yes	High	Opening enhancement.
17	6229 - Mixed lowland shrub	7.9	No	Unspecified	
19	3102 - Grass	1.8	Yes	High	Needs maintenance
22	3102 - Grass	0.8	Yes	High	Opening enhancement.
24	3102 - Grass	2.2	Yes	High	Opening enhancement
25	3102 - Grass	1.7	Yes	High	Opening enhancement.